What is cutis aplasia?

Cutis aplasia is a term used to describe an area of skin that has not formed fully and is a congenital (present at birth) condition. In some cases, underlying tissues, including bone, may be missing as well. The area of missing skin varies in size from a few millimetres to up to 10cm across. It also varies in which layers of skin are affected. Usually just the top layer of skin (epidermis) is affected, but occasionally the dermis or subcutaneous layer are affected as well.

What are the symptoms of cutis aplasia?

The main visible symptom is the area of missing skin. Very rarely if an area of skull bone is missing the brain tissue could be exposed. Cutis aplasia can sometimes be associated with other problems. The doctors will examine your child closely to check if this is the case.

What causes cutis aplasia?

We do not yet know what causes cutis aplasia to occur during pregnancy. Various theories have been put forward, for instance, medicines, genetic factors or a defect in skin development, but further research is needed to confirm or rule out these theories.

How common is cutis aplasia?

Figures vary but it is thought that it occurs in 3 in every 10,000 births. However, it may be more common than this as minor cases of cutis aplasia may not be recognised and reported. Cutis aplasia affects all races and both genders.

How can cutis aplasia be treated?

If the area of missing skin is small, it will usually heal without treatment over a period of months. The area will need to be kept clean and free from infection by gentle washing and occasionally using ointments. When a scab develops, it can be quite thick and hard. This will dry out over time and may flake away...
in pieces. This is normal and to be expected. Infections, if they occur, can be treated with antibiotics. Dressings may be suggested to protect the area while it heals.

If a very large area of skin is involved, it may need to be treated in an operation, possibly using tissue expansion. This involves inserting a surgical balloon under an unaffected area of scalp skin, inflating it gradually over a period of weeks so that the skin stretches and then using this ‘extra’ skin to cover the bald area. However, tissue expansion is an intensive and time consuming treatment and is not generally recommended for small areas of skin.

Another approach would be to treat the area with a series of operations followed by skin grafts taken from elsewhere on the head or body. The area will need care while it is healing to prevent infection. Eventually the remaining scar will be covered by hair and so not very noticeable.

If an area of skull is missing, it may need to be replaced by a neurosurgeon (specialist in brain surgery) either with a bone graft from elsewhere in the body or an artificial plate so that the brain is protected from bumps and knocks. If any tissue is lying outside the skull, this can be corrected in the same operation. Intravenous (into a vein) antibiotics are almost always recommended if an infection develops, as the missing area of skull can allow germs to enter the body. This increases the risk of meningitis (inflammation of the brain covering or spinal cord).

Are there any risks?
The only risk with small areas of missing skin is infection, which can be reduced by gentle washing. If an infection occurs, this can be treated with a course of antibiotics, either as medicine or as an ointment to apply to the area. There is a small chance of developing meningitis (inflammation of the cerebrospinal fluid that surrounds the brain and spinal cord) if there is a large area of skin and bone missing. There is also a risk that the blood vessels on the surface of the skull could be knocked leading to bleeding.

What is the outlook for children with cutis aplasia?
Generally the outlook is good if the area of missing skin is small and the child has no other problems. Treatment may be time consuming but results are usually good, with no long term effects.

You should seek medical attention if:
- Your child has a temperature of more than 37.5°C
- Your child is irritable or not feeding as well as usual
- You can see swelling or redness near the site or there is any oozing
- Your child is in a lot of pain and pain relief does not seem to help